US009638463B2

(12) **United States Patent**
Cross

(10) **Patent No.: US 9,638,463 B2**
(45) **Date of Patent: May 2, 2017**

(54) **SEPARATELY CONTROLLABLE AIR CIRCULATION DRYING SYSTEM**

(71) Applicant: **Eddie Cross**, Inwood, NY (US)

(72) Inventor: **Eddie Cross**, Inwood, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/709,737**

(22) Filed: **May 12, 2015**

(65) **Prior Publication Data**

US 2015/0241122 A1 Aug. 27, 2015

Related U.S. Application Data

(60) Provisional application No. 62/018,982, filed on Jun. 30, 2014.

(51) **Int. Cl.**

F26B 3/04	(2006.01)
F26B 21/00	(2006.01)
F26B 9/02	(2006.01)
F24H 3/04	(2006.01)
F24H 9/20	(2006.01)
F24D 19/10	(2006.01)
G05D 23/19	(2006.01)

(52) **U.S. Cl.**

CPC ***F26B 3/04*** (2013.01); ***F24D 19/1084*** (2013.01); ***F24H 3/0411*** (2013.01); ***F24H 9/2071*** (2013.01); ***F26B 9/02*** (2013.01); ***F26B 21/004*** (2013.01); ***G05D 23/1905*** (2013.01)

(58) **Field of Classification Search**

CPC F26B 3/00; F26B 3/04; F26B 9/02; F26B 19/00; F26B 21/00; F26B 21/04; B01D 35/00; B01D 35/14; A47K 10/00; A47K 10/48; F24D 5/00; F24D 5/02; F24D 19/1084; E04B 5/00; E04B 5/48; F24H 3/0411; F24H 9/2071

USPC 34/90, 202, 218; 454/187; 4/598, 599; 392/384, 385

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,157,105 A		11/1964	Tamm et al.	
5,269,071 A		12/1993	Hamabe et al.	
5,839,879 A		11/1998	Kameoka et al.	
6,148,539 A	*	11/2000	Hatfield	A47K 10/48 34/223
6,927,686 B2	*	8/2005	Nieters	G08C 17/00 340/539.17

(Continued)

Primary Examiner — Stephen M Gravini

(74) *Attorney, Agent, or Firm* — Global Intellectual Property Agency, LLC; Daniel Boudwin

(57) **ABSTRACT**

An air circulation system adapted to dry floors that is segregated and separately controllable from the building's HVAC system. The system includes an air duct having an inlet and an outlet, a fan, and a heater. The inlet is adapted to drawn air in from either the surrounding environment or is connectable to the building's existing air circulation ductwork. The system is designed so that the outlet is positionable adjacently to a floor surface when the system is installed in a wall or to the exterior surface of a wall, thereby allowing the fan to blow air directly over the surface of the floor, increasing the efficiency with which the floor is dried. The present system further comprises a wireless transceiver for wirelessly controlling the functionality of the present system and various other activation mechanisms for separately controlling the fan and the heater without requiring direct user input.

14 Claims, 4 Drawing Sheets